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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/679,646

10/06/2003

M. Scott Buck

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3937

7590

03/17/2005

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EXAMINER

TRIEU, VAN THANH

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/679,646		BUCK ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Van T Trieu		2636	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____  | 6) <input type="checkbox"/> Other: _____                                    |

## ***DETAILED ACTION***

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "rolling sensor" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Because the rolling sensor is differently and separately from the tire switch (10) as described in the specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by **McCelland** [US 5,963,128].

Regarding claim 1, the claimed tire pressure detection system comprises a pneumatic tire (the vehicle tire, see abstract); and the valve system coupled to the tire (the tire valve, see col. 1, lines 61-64); and the switch contained within the valve system (the pressure sensor 120, pressure switch 130 and the roll switch 140, see Fig. 1, col. 4, lines 1-6); and the transmitter (the UHF transmitter circuit 170, see Fig. 1, col. 4, line 7-8); and when the switch is actuated the switch will transmit tire pressure information to

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the transmitter (upon closure of the roll switch 140, the ASIC 100 begins to sample the tire pressure periodically as detected by pressure sensor 120 and transmits the detected pressure to the UHF transmitter circuit 170 for transmitting to the dashboard receiver, see Figs. 1-3, col. 2, lines 5-15, col. 4, lines 17-54).

Regarding claim 3, all the claimed subject matters are cited in respect to claim 1 above, and including the rolling sensor (the rolling switch 140, see Fig. 1).

Regarding claim 4, all the claimed subject matters are cited in respect to claim 1 above, and including the periodically transmits tire pressure information to the receiver every minute, see Fig. 3, col. 4, lines 50-54.

Regarding claim 5, all the claimed subject matters are cited in respect to claim 1 above, and including the vehicle body computer (see col. 2, lines 53-57).

Regarding claim 6, all the claimed subject matters are cited in respect to claim 1 above.

Regarding claim 8, all the claimed subject matters are cited in respect to claims 3 and 6 above.

Regarding claim 9, all the claimed subject matters are cited in respect to claims 4 and 6 above.

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Regarding claim 10, all the claimed subject matters are cited in respect to claim 1 above, and including the depressing tire switches in the tires of a vehicle in a specific sequence (the pressure sensor 120, pressure switch 130 and/or the rolling switch 140 is operated/depressed in a periodically manner and when the vehicle is in motion, see Fig. 1, col. 2, lines 5-41 and col. 4, lines 9-50); and learn the position of each of the tire (the dashboard receiver system includes a learn mode for learning each wheel identity and its position to be displayed, see Fig. 3, col. 6, lines 53-67 and col. 7, lines 1-7).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable

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over **McClelland** [US 5,963,128] in view of **Smith et al** [US 6,856,245].

Regarding claim 2, **McClelland** fails to disclose the switch includes a plunger that may be depressed. However, **McClelland** teaches that an electronic unit with pressure sensor 120, pressure switch 130, rolling switch 140, tilt switch 150 and reed switch 160, battery and electronic control ASIC 100 is mounted to the tire valve system on the inside of each tire, see Fig. 1, abstract. **Smith et al** suggests that a tire pressure sensor device 10 includes a pressure sensor 67, RF transceiver 68 and a micro-controller 71 mountable on a threaded valve stem 11 of an inflatable tire 12 of a vehicle having an actuating pin or plunger 28 adapted to be depressed to opening the valve stem 11 when the sensor device 10 is threaded into the valve stem 11, for detecting of tire pressure, see Figs. 1 and 2, abstract, col. 1, lines 48-65, col. 2, lines 27-67, col. 3, lines 1-67 and col. 4, lines 1-44. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the tire pressure sensor depress the plunger of the valve stem of **Smith et al** for the electronic pressure sensor of **McClelland** in order to easily replacing or removable of the sensor device by a vehicle driver, operator or a mechanic upon changing of new tire, without changing the detected results of the tire pressure sensing device.

Regarding claim 7, all the claimed subject matters are discussed between **McClelland** and **Smith et al** in respect to claims 2 and 6 above.

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### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Mangafas et al** discloses a tire valve element assembly comprising a pressure sensing and transponder arrangement. The arrangement is mounted on a short valve element so as to extend axially from the short valve element and is sized to sliding fit within and removable from a valve stem of a tire. [US 5,987,980]

**Zhou** discloses a wireless vehicle safety monitoring system including a wireless pressure sensor module is miniaturized for mounting on the tire valve stem and a small monitor unit can be dashboard mounted. [US 6,535,116]

**Handfield et al** discloses a pneumatic tire monitoring system comprising a pressure sensor transponder unit for each pneumatic tire of a vehicle. [US 5,731,516]

6. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.



**Van Trieu**  
**Primary Examiner**  
**Date: 3/10/05**